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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,688	07/07/2003	Junichi Ohsako	S1459.70052US00	7414

7590 09/10/2004
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Boston, MA 02210

EXAMINER

CRUZ, MAGDA

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/614,688	Applicant(s) OHSAKO ET AL.	
	Examiner Magda Cruz	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-22 and 26-31 is/are rejected.
- 7) ☒ Claim(s) 7-9 and 23-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figure 10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
3. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Marked-up Drawings" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 10-22 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sinkoff view of Jones et al.

Sinkoff (US Patent Number 6,724,529 B2) discloses a projection screen (40) and the method for manufacturing said projection screen, on which an image is displayed by receiving projection light, comprising a substrate (45), a light diffusion control portion (60) on a surface of the substrate (45), having a plurality of convex portions or concave portions (M); and an optical thin film (50) on the light diffusion control portion (60), the optical thin film (50) having convex portions or concave portions (M) having the same shape as that of the convex or concave portions of the light diffusion control portion (60); wherein the convex portions or concave portions (M) of the light diffusion control portion (60) are formed by processing the substrate (column 3, lines 26-32); wherein the convex portions or concave portions (M) of the light diffusion control portion (60) are designed by an optical simulation so as to determine the an angle of light reflection from the optical thin film (column 5, lines 28-31); wherein the convex portions or concave portions (M) of the light diffusion control portion have spherical surfaces (column 5, lines 12-15); wherein the substrate (45) comprises a macromolecular material (i.e. polymer);

wherein the macromolecular material is selected from a group consisting of polycarbonate, polyethylene terephthalate, polyethylene naphthalate, polyether sulfone, and polyolefin (column 4, lines 35-36).

Sinkoff teaches the salient features of the present invention, except an optical thin film reflecting light in a specific wavelength band and transmitting at least visible light other than the light in the specific wavelength band, a plurality of spherical beads having a predetermined diameter and a bead-fixing layer filling the spaces between the beads to fix the beads, a light absorption layer for absorbing light transmitted through the optical thin film, wherein the light absorption layer contains a black paint, wherein the projection light is a laser beam, and wherein the specific wavelength band includes a red wavelength band, a green wavelength band, and a blue wavelength band. However, Sinkoff discloses an optical film having a plurality of spherical surfaces (column 5, lines 12-15).

Jones et al. (US Patent Number 6,529,322) discloses an optical thin film reflecting light in a specific wavelength band and transmitting at least visible light other than the light in the specific wavelength band (column 3, lines 34-37), a plurality of spherical beads having a predetermined diameter and a bead-fixing layer filling the spaces between the beads to fix the beads (Figure 1), a light absorption layer for absorbing light transmitted through the optical thin film (abstract, lines 5-9), wherein the light absorption layer contains a black paint (column 1, lines 43-45), wherein the projection light is a laser beam (column 3, line 28), and wherein the specific wavelength

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band includes a red wavelength band, a green wavelength band, and a blue wavelength band (column 3, lines 34-36).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the optical film disclosed by Jones et al. in combination with Sinkoff's invention, for the purpose of having high contrast viewing screen capable of high resolution (column 4, lines 51-52).

Allowable Subject Matter

6. Claims 7-9 and 23-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

An optical thin film comprising a dielectric laminate including alternately laminated high-refractive-index layers and low-refractive-index layers, and a thickness of each layer of the dielectric laminate is in a range of 80 to 200 nm (as in claims 7 and 23). Said recited elements in combination as claimed cannot be made inherent or obvious by the prior art of record.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kellogg (US Patent Number 2,480,031) discloses a rear projection screen comprising convex and concave corrugations.

Yamashita (US Patent Number 3,964,822) teaches a projection screen and process for production thereof.

Kikuchi (US Patent Number 4,232,939) shows a screen with high luminance and wide angle.

Ferro (US Patent Number 4,190,320) discloses a projection screen that is especially suitable for wide angle viewing.

Nezu (US Patent Number 5,456,967) teaches a reflection type screen having a dimensionally stable substrate.

Kaminsky et al. (US Patent Number 6,636,363 B2) shows a bulk complex polymer lens light diffuser.

Shimoda et al. (JP 2003-270725) discloses a projection screen and manufacturing method thereof.

Seki et al. (US 3,510,197) teaches a projection screen in which light is reflected with a poor directivity in one plane while the light is reflected with sharp directivity in a plane perpendicular with respect to said plane.

Niwa et al. (US Patent Number 6,233,095 B1) shows a screen member for a reflex type screen.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (571) 272-

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2114. The examiner can normally be reached on Monday through Thursday 8:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JUDY NGUYEN
PRIMARY EXAMINER

Magda Cruz
Patent Examiner
September 3, 2004